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ABSTRACT

The purpose of this conference was to bring together leaders of public and private schools to discuss matters of mutual concern and interest. The morning session was concerned with the topic "The Child, the Teacher, the Machine" and focused on educational technology with emphasis on computer-aided instruction. The morning workshops dealt with "The Child as One of the Continuing Foci of Education" and "The Role of Technology in Communicating with the Child." A luncheon keynote speech was on "Connecting Education Resources," specifically the coordination among the many educational and cultural agencies in New York City. The afternoon session examined "The Expanding Role of the School," especially in the provision of social services and environmental education. Workshops were entitled "The School as the Local HEW?" and "Education and Survival." All the major presentations and workshop reports are included in the document. (JM)

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Proceedings

Fifth Annual Conference on Public and Non-Public Schools: Education Faces the 80's and Beyond

DECEMBER 5, 1979

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Edited by Seymour P. Lachman

Center for Advanced Study in Education
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PROCEEDINGS OF THE
FIFTH ANNUAL CONFERENCE ON
PUBLIC AND NON-PUBLIC SCHOOLS:
EDUCATION FACES THE 80's AND BEYOND

INTRODUCTION

The Fifth Annual Conference on Public and Non-Public Schools took place on December 5, 1978. These annual conferences, under the Chairmanship of Seymour P. Lachman, are co-sponsored by the Graduate School and University Center and Baruch College of the City University of New York. They bring together the leaders of the public and non-public schools to discuss matters of mutual concern and interest. Among the participants were the representatives of the following organizations:

Agudath Israel of America
Catholic Schools of the Archdiocese of New York
Catholic Schools of the Diocese of Brooklyn
Citizens Committee for Children
Council of Supervisory Associations
Board of Jewish Education of Greater New York
Greek Archdiocese School System
National Hebrew Day School Movement
Lutheran Church - Missouri Synod Schools
New York City Board of Education
New York City School Boards Association
Public Education Association
United Federation of Teachers
United Parents Associations
Representatives from various private non-sectarian schools

The Planning Committee, representing the above groups, decided that the theme for the Fifth Annual Conference on Public and Non-Public Schools should be Education Faces the 80's and Beyond. The morning session concerned itself with, The Child, The Teacher, The Machine, and had workshops dealing with, "The Child as one of the Continuing Foci of Education" as well as, "The Role of Technology in Communicating With the

Child." The afternoon session examined, The Expanding Role of the School and had workshops dealing with, "The School as the Local HEW?" as well as, "Education and Survival." The overall theme and the subtopics were of major interest to all the school systems represented at the conference.

The Honorable Gordon Ambach, Commissioner of Education, The State of New York, was the luncheon keynote speaker. His topic was, "Connecting Education Resources."

These proceedings are a record of what took place at the conference. The results will be recorded in new curricula, new workshops and seminars and, ultimately, in the classroom.

MORNING SESSION

THE CHILD, THE TEACHER, THE MACHINE

Dr. Alexander Schure
President
New York Institute of Technology

Our societies are in the midst of change. Social and technological effects will be more rapid and deeper than before. The world of the twenty-first century will be as different from today as our world is from that in existence at the time of the Pharaoh's. Each day we are born again into a world that is new, one breaking with the past at ever accelerating rates.

Alvin Toffler, in describing Future Shock, points out, "If the last 50,000 years of man's existence were divided into lifetimes of approximately sixty-two years each, there have been about 800 such lifetimes. Of these 800, fully 650 were spent in caves. To illustrate the regency of time-line changes, he cites the following examples:

Effective communication by writing	Last 70 lifetimes
Printed word	last six lifetimes
Precision measurements	last four lifetimes
Electric motor	last two lifetimes
Virtually all material goods in use today	last lifetime
Reversal of agriculture-industrial white collar jobs (agriculture workers in major nation is down to 15% of population)	last lifetime

Elimination of national boundries for communication and social insulation (How Jonestown Affects Us) - [illegible]t lifetime

If we were to examine our industrial civilization, we would find that it is based on a solid foundation of science and technology. Let me inventory for you some of the forces that we have come to take for granted and yet are, in the history of mankind, relatively recent.

INVENTORIES AND FORCES:

1. Materials:
   a.) High-strength materials; heatproof, high strength plastics; high performance fabrics
   b.) Precision casting, forging and extrusion
   c.) Water
   d.) Pure air
2. Power:
   a.) Solid; liquid; gas; nuclear; water
   b.) Fission power; hydromagnetic power
   c.) Fuel cells
   d.) Thermoelectric; thermiunic
3. Chemistry and Biology:
   a.) Physico-chemical techniques of separation
   b.) Biological chemistry; molecular biology
   c.) Petroleum technology
4. Transportation:
   a.) Internal combustion engine
   b.) Electric Motor cars
   c.) Motor cars with pollution control

d.) Rail; high-speed transport

e.) High-speed sea transport

f.) Container ships

g.) VTOL; supersonic air transport; air buses (747); rocket and space travels

5. Communications - Societal, Education and Entertainment:

a.) Telephone; radio; television; facsimile; sattelite

b.) Cable; slow scan; interactive; cassette; television

c.) Video and audio recorders; disk and paper records, multi-track

d.) Computers and data processing

e.) LSI memories; alternate memory techniques

f.) High speed print

g.) Software

h.) Information retrieval and associative devices

i.) Automated monetary and banking systems

j.) Mathematical models to simulate social systems

6. Automation:

a.) Robots: manually controlled mechanical hands; exoskeletons; programmed mechanical devices

b.) Cybernetic machines - The Sensing Bug

7. Biological; Ecological:

a.) Food; improved crops, animals, artificial foods

b.) Desalination of sea water

c.) Bio-engineering technology (pacemakers)

d.) The pill and other methods of contraception

e.) Organ transplants

f.) Artificial organs (hearts)

g.) Mind-expanding drugs; personality changing drugs

h.) The elimination of "pain"

This list can be expanded, but within it one can see the substantial evidence undergirding a belief that industrial civilization is indeed founded on the bases of science and technology. We have an advanced civilization built by the advanced artisans. If much of our present civilization is based on the work of advanced artisans, we come then, not surprisingly, to the application of technology to education. The process is still in its infancy. If it has taken the aerospace industry from 1903 to 1973 to move from Kitty Hawk to a probe of Mars, it is likely that we will see in some shorter span than that 70 years, educational technology having the impact and capability that its proponents advocate for it. At this moment, though, the technologies we have available, while varied, are primitive.

Immediate answers to the urgent problems of administrators, teachers, children and school boards are not likely from the collection of presently available gadgets and systems thought of as "Educational Technology". To ask for solutions at this moment, through use of educational technology as a method of reducing the relentlessly rising cost of education is premature. Yet, increasing promises are on the horizon. To quote James Koerner of the Sloan Foundation, "History suggests that new technologies are often over-rated in the short run but vindicate their prophets in the long term."

The National Academy of Engineering's Instructional Technology Committee on Education defines educational technology as "the body of

knowledge resulting from the application of the science of teaching and learning to the real world of the classroom." Thus for them, and for others who share their views, the definition of technology is encompassing and broad. The distinction drawn by the Commission on Instructional Technology represents an attempt to encompass present reality and future promise, to fix upon the concrete without limiting either the scope or reach of technological applications.

Educational technology can be defined in two ways. In its more familiar sense it means the media born of the communications revolution which can be used for instructional purposes alongside the teacher, textbook and blackboard. In order to reflect present day reality, the Commission looked at the pieces that make up present day instructional technologies: television films, overhead projectors, computers and the other items of "hardware" and "software". . . In nearly every case, those media have entered education more in isolation than in combination. The Commission developed a second and less familiar definition of instructional technology which goes beyond any particular medium or device, saying, "It is a systematic way of designing, carrying out, and evaluating the total process of learning and teaching in terms of specific objectives, based on research in human learning and communication and employing a combination of human and non-human resources to bring about more effective instruction." The widespread acceptance and application of this last definition still belongs to the future. While the meanings are broad and varied, the practical applications are usually quite narrow. When the terms "educational technology" or "instruc-

tional technology" are used, they are frequently used interchangeably. This may not be accurate useage, but little harm is done by the interchange. . .

Teachers and administrators have obvious concerns as they ponder decisions to be made with respect to their potential use of instructional technology. The failures of the past are easily identifiable and are worth recapitulating:

1. The equipment or hardware used has often fallen short of claims made for it. The more complex and advanced the hardware systems, the more serious the problems of reliability, high maintenance, and incompatibility with other systems.

2. Industry-wide standardization is not present. Further, the obsolescence rate of hardware is substantial, requiring capital investments for new or improved systems continuously. Then, programming, or software, has kept pace with hardware development. Most materials intended for use on teaching devices reflect only a rudimentary state of the art.

3. Not enough is known about the true nature of the educational process. It is necessary for us to know more about the fashion in which learning occurs with heterogeneous groups of students. The exact roles of intelligence, motivation, environment, learning styles, personality differences and other patterns affect the precision of a true educational technology system.

4. Past failures reflect a number of additional factors - projects are often begun without definitive articulation of purpose; or, without prior attention to the technical components of the project; or, without direct involvement of the participants, particularly teachers; or,

without thorough, orderly evaluation; and/or, without adequate understanding of the attitudes of teachers towards the whole concept of technology in education.

TEACHER RESISTANCE TO EDUCATIONAL TECHNOLOGY:

Failure to understand and observe any of the conditions just stated tends to preclude success. Many studies undertaken in the past have often included a number of the requisites for failure, and hence the record of their accomplishments to date has not always been outstanding.

Since administrators are concerned with teacher interactions, it is valuable to amplify the rationales offered for teacher resistance. Teachers in the classroom tend to resist technology, for several reasons:

1) Most important - the basic conservatism of the educational establishment;

2) fear of the effects of instructional technology on their role and responsibilities;

3) the ineptitude and insensitivity of the equipment manufacturers;

4) the minimal or non-existent involvement of teachers at various stages of the process.

In discussing the conservatism of the education establishment we can identify these conditions as major ones which inhibit teacher acceptance of innovation:

1) ambiguity of the goals of education, making teachers hesitant to experiment;

2) misunderstanding or misinterpretation of new reforms;

3) identification with the traditional system;

4) identification with union practices and regulations;

5) isolation from other teachers;

6) a wide range in teacher effectiveness and adaptability.

Another major base for teacher resistance lies in the apprehension engendered by an increasingly sophisticated educational technology. Teachers are hesitant to acquire new responsibility which they may not be professionally equipped to handle. They fear that technology may be teacher replacers instead of teacher extenders. They are concerned that they may lose what they regard as "the essense of professional being"; and that they will face competition from an inhuman, unbeatable adversary. Instructional technology, to many, brings a vision of invasion of their authority in the classroom, a loss of autonomy, degradation of professional privacy, and separation from the student. Their interpretations are those of a downgraded position, loss of recognition and prestige, and reduced rewards.

Psychologically, teachers' expectations from life and work are much the same as everyone else. They see their traditional pattern of work threatened and their future made uncertain by the introduction of instructional technology. Proper incentives for teachers have been lacking. In their view, they are asked to contribute to a field in which little professional recognition is offered, one where royalty rights are low or non-existent compared to the writing of a textbook; or they are being asked to explore a technique of education which they believe could eliminate jobs in a time of tight employment conditions. Often the plans for exploiting educational technology have been designed by consultants drawn from outside the school system, individuals who will have no responsibility in carrying out their recommendations under actual working conditions. Sometimes the educational systems have been inconvenient to use or have imposed an outside so-called master teacher

over the classroom teacher; or, no true evaluation is available. Funding has not been dependable in the past. Then too, where industry has convinced the local educational school boards to invest in expensive hardware, the results have often been dubious. Once a school board has made a large investment in any kind of technical system that is either non-effective or poorly used, it no longer is a good prospect for further technological systems.

ESSENTIALS FOR SUCCESS IN EDUCATIONAL TECHNOLOGY APPLICATIONS:

The converse of the lessons we learn from our failures are guides to a formula for success in educational technology applications. Thus, as essentials we can stipulate:

1) A recognized and generally agreed-upon need must exist.

2) Objectives must be stipulated, articulated and must guide the projects.

3) A structure should exist which makes success possible, or at least does not in advance assure failure.

4) Leadership must be exerted at the right level of authority, responsibility and control.

5) Teachers must participate in and support the project.

6) Rationality must determine the use of the techniques selected.

7) The techniques used must be reactive.

THE MAJOR TECHNICAL SYSTEMS WHICH WILL INFLUENCE CHANGE:

The major technical systems include:

1. Broadband Communications: These are systems capable of transferring very large numbers of visual or audio electrical signals to allow any kind of educational transmissions to audiences at almost any distance. Coaxial cables, microwave, satellites, and lasers, give a capability to structure large numbers of telecommunication networks, with almost unlimited capabilities. These networks could tie public and private educational institutions together and feed information directly into the homes.

2. Computers: The great strengths within this technology is its capability to process vast amounts of information to the user. Central time sharing and/or the use of mini and micro computers will make available to the educator greater ranges of access to computer projects. (Calculators are included in this category.)

3. Mathematical Modeling: Complex educational-social systems can be structured through mathematical simulation. When coupled to computer capacities, an extended range of information becomes available to the administrator.

4. Video Reproduction: The capacity to store in compact form motion pictures on tape decks or film for replay at the convenience of the student coupled with broadband technology, offers promise of combining video and computer technology to giving virtually unlimited systems for transferring moving pictures or digital data. We can, through this combination, send to any audience any amount of educational programming with illustrations and sound. Further, video tapes do not even require a transmission system, needing only transportation to move from the originator to the point of playback or from one point of playback to another.

5. Books & Graphic Devices: The availability of inexpensive copying devices and the breakthroughs in graphic techniques have implemented the use of one of education's major visual arts, the book. The recent proliferation of paperbacks is an example of improved graphic capabilities.

6. Miniaturization: Microfiche technology now allows a substantial area of miniaturized images to be placed on transparent materials to be used by anyone seeking information at their convenience through enlargement on either a reading machine or reproduction onto a piece of paper. An entire major encyclopedia volume is presently available in the form of a single fiche measuring 3 X 5".

The single greatest future potentials in educational technology lie in the computer as it will be used by and for teachers and children. In a recent series of articles in the August and September 1978 issues of I.E.E.E. Spectrum, entitled, "What's new, Teacher? Ask the Computer," the article responds, "The answer, at the moment, resides in specialized uses of the computer for supplementing the teacher."

"In computer-aided instruction (CAI), the goal is to replace the traditional student-teacher dialogue with a student-computer interaction.

Because machines communicate faster than humans, they should be able to provide more, and better, communication. This objective has been achieved in drill and practice, and in other narrowly defined circumstances -- for example, classes for sales personnel and aircraft and weapon-systems training. However, these circumstances represent only a fraction of all educational environments. In the vast majority of cases, CAI has yet to show results comparable to those associated with an experienced human teacher, even when exceptional programming material has been available."

"In an effort to overcome these and other perceived shortcomings in classical CAI (see "A second chance for computer-aided instruction," August, p. 29), a number of computer-oriented educators have developed new approaches, ones that avoid what is seen as the fundamental pitfall: the attempt to create a general-purpose communications model, in the face of the fact that no such model yet exists in real life."

"Educators have yet to agree among themselves on the right mix of techniques ranging from the carrot-and-stick approach associated with behaviorist B. F. Skinner to guided free play as advocated by Swiss psychologist Jean Piaget. They have yet to agree on when to choose between formal representations of data and intuitive explorations, or when to choose between graphical images and abstract statements. CAI critics point out that even if the right mixture could be agreed upon, the very difficult problem remains of reaching a consensus on its subtle ingredients. How, for instance, does one develop intuitive understanding, create graphically instructive images, or even decide when a student has mastered a subject?"

New approaches using CAI that will be reflected in the forthcoming decade already include:

1) Eyeglasses and Mirror Concept - Computer lets learner see more clearly what he or she is doing and "reflects" to an observer the progress being made.

2) Computer as an Articulate Expert - Carefully does out information only at the request of the learner.

3) Low Cost Simulator - Low cost hobbyist computers with graphic facilities, very successful with children.

4) Computer as a Menagerie-For Young Children - Uses rudimentary forms of things like balloons, animals, etc., that are familiar to young children and teaches spelling, grammar, the concept of fractions, etc., using these presentations.

Some computer designers have a much more exciting concept relating to the future of computerized educational technology. The Xerox Palo Alto Research Center Learning Research Group are well into the creation of a new, dynamic medium for creative thought which they call the Dynabook. In their words, "Imagine having your own self-contained knowledge manipulator in a portable package the size and shape of an ordinary notebook. Suppose it had enough power to outrace your senses of sight and hearing, enough capacity to store for later retrieval thousands of page-equivalents of reference material, poems, letters, recipes, records, drawings, animations, musical scores, waveforms, dynamic simulations, and anything else you would like to remember and change. We envision a device so small and portable as possible which could both take in and give out information in quantities approaching that of human sensory systems. Visual output should be, at the least, of higher quality than what can be obtained from newsprint. Audio output should adhere to similar high fidelity standards.

For educators, the Dynabook can be a new world limited only by their imagination and ingenuity. They can use it to show complex historical inter-relationships in ways not possible with static linear books. Mathematics becomes a living language in which children can cause exciting things to happen. Laboratory experiments and simulations too expensive or difficult to prepare can easily be demonstrated. The production of stylish prose and poetry can be greatly aided by being able to easily edit, file and "debug" one's own compositions. Those who believe in a free, open approach to creativity and learning will find a wealth of cross-connection and philosophy of world-view which promotes synergystic thinking. Those who feel that a more structured approach is appropriate, including those interested in computer-assisted instruction, can easily implement their own version of the Socratic dialogue using dynamic simulation and half-toned graphic animation.

For children, this dynamic notebook, or Dynabook, can be an environment in which the natural activities are creative thinking and planning; visualization of effects and their causes; the assumption of varying perspectives towards humans, knowledge, and culture; and the enhancement of their personal style. It can also be a magic gateway to the rich world of the already-known, offering a compelling way to dynamically peruse the great discoveries of the past and present in ways that are just not possible with static media such as books and photos."

Many of the technological aspirations of the Dynabook have already been attained. What it will make possible and what the educators must consider are the implications for the curricula made available to chil-

dren. Whatever is done, though, will take place only within the existing dynamic characteristics of the school structure.

We should recognize certain truisms about the formal educational systems in which our children, teachers and any supportive "machine" technologies function. Built into the public and private schools alike are constraints which determine a day to day reality. Among the factors of influence one can include geographical location; the nature and extent of physical facilities; the existence or absence of collective bargaining agreements; the nature of governance, whether public or private; budgetary limitations and the spectre of continued inflation; and the nature, talents, motivations, interests and personalities of the faculty, student and parental constituencies; and, most of all, their concepts of what the true missions of their schools are.

What happens in the next decade to children, to teachers and to their use of technology within formal educational systems will be governed by the interactions growing out of the variables listed above. The ability of teachers and administrators to manipulate the formal educational system, with wit, ingenuity and imagination, politically and technically, can make for vast beneficial educational changes for the children they lead. The task is not an easy one.

I suggest to you that you must consider the impact of technology on teacher and on child within the contexts of the major political and economic questions facing public and private education. You must focus on the ever present and continuing issue of financial support, a mundane problem, yet one that will govern to a large extent the role of technology in the 1980's. If technology interventions mean sharply increased

costs, they will rapidly become an anathema to a tax and/or tuition burdened public. You must search and introduce on-going standards of evaluation and comparative data to judge the benefits of what is one with technology. The question that will be asked of you, once the glow of innovation has lessened, is "to what end" and for what long term social purpose the transitions have been made.

Newly developed, available technology now makes possible approaches to the education of children that were previously not practically attainable. Past and on-going research and development have produced sufficient technical advances to bring individualized or teacher supportive instructions into the realms of practicality for large numbers of students and for total school systems. Bringing them to your children is the great challenge of the 80's.

LUNCHEON SESSION

OPENING REMARKS

Reverend Vincent D. Breen
Secretary of Education
Roman Catholic Diocese of Brooklyn

I am delighted to be with you on this unique occasion that now annually brings together public and non-public school representatives. Each year the spirit of cooperation has increased; each year we have grown in our ability to speak to each other about common problems.

This year our discussions try to project the future of education as we come to the end of the eighth decade of the twentieth century and look forward to the last twenty years of this century.

The topics presented for our discussion today are most apt. The 70's has been a period of great technological advance and it is clear that technology will play a greater role in education in the future. The 70's has also been a time when our whole society has stressed the rights of the individual and the educational value of individualizing programs for the children we serve.

At the same time we know that the school is being asked to meet a long list of expanded services, some of which may even be beyond the present capabilities or expectations of ourselves as educators. Nevertheless they are some of the challenges of the future. Yet I could not help but reflect at today's session, that what we were experiencing today was a moment of deja vu.

In July of 1970 Alvin Tofler published his book Future Shock. He

spoke of the rapid change that was occurring in society, of what he referred to as the death of permanence and the permanence of transition. He made reference to novelties and diversities that were short lived and he asked how do we adapt and survive in the future that facing us. Much of what Tofler asked is still real and still confronts us today, but we know that there are permanences. Despite attacks upon a variety of values in our society, we recognize that there are permanent religious and social values. The nature of man is to be both knower and lover and this is another permanent value. We must use these permanences to guide us to the future. The challenges that confronted and worried Tofler still exist but, perhaps, we are better prepared to meet them.

We, as educators must try to develop three basic sets of skills in the children we serve:

First, we must develop communications skills so that they are able to relate effectively to others and to grasp the content of another's thought. It is in this way that people come to truly communicate at the deepest levels of both knowledge and love.

Secondly, we must develop human relations skills in the adult of the future so that they might understand the existence of different groups within society and the method of relating to these groups. Whether the groupings be of an ethnic, religious, or special interest kind, what is needed is for us to develop the skill to both understand why these groups exist and the values for which they stand.

Finally, the last skill that we must develop is the ability to make a

decision. There are many problems that continue to confront us but perhaps the most devastating of all is the uncertainty that leads us to inertia. The adult of the future must be able to make decisions based upon sound knowledge and springing from the ability to relate and communicate.

However, my role here today is not, indeed, to make a speech but to introduce to you the members of the dais and the New York State Commissioner of Education, who will shortly address us.

KEYNOTE ADDRESS--CONNECTING EDUCATION RESOURCES

Gordon M. Ambach
Commissioner of Education
New York State
Education Department

I am pleased and privileged to be with you. I have joined you to strengthen contacts and to share my commitment to pluralism in education. I welcome this opportunity to focus on the complementary roles of the public and non-public schools in New York City. I want to be of help to you in your stewardship. At the same time, I ask you to assist other members of the education community who share common purposes and face common problems.

We have long recognized in this State the interdependence of all educational institutions, going all the way back to 1784 when the State Legislature established the University of the State of New York -- a university unlike any other anywhere including schools, colleges, museums, libraries, historical societies and other institutions and agencies involved in education. This unique educational resource was intended from the outset to promote and encourage learning at all levels throughout New York State and has always included both public and independent institutions. I note, for example, that the first school chartered by the Regents, in 1787, was Erasmus Hall, then a newly created academy operated by the Dutch Reformed Church in Flatbush. Significantly, in that same year, the Regents advanced the first legislative proposal for State financial support of public schools.

Today, as in the past, we draw no exclusionary distinctions

between education under public auspices and private auspices, profit-making or not, whether that education is offered at the elementary, secondary or postsecondary level. We support diversity and competition. And we seek to assure all learners of a meaningful choice to accommodate different aptitudes, interests and objectives. We have, then, an educational system which is comprehensive, but not monopolistic, which forms one cohesive whole while providing many options. This diversified educational power base needs to be maintained and strengthened. Making it stronger is a task for all of us to work on together.

The State role here is twofold. The Regents and Education Department have advisory functions and supervisory functions. That is, we provide service and technical assistance as well as carrying out certain regulatory responsibilities. There are both carrots and sticks in our quiver.

In general, the regulatory role relates to determining who shall offer education in New York State and under what conditions. We establish minimum standards which must be met by all institutions under our jurisdiction. Those standards apply to public and non-public institutions, which are subject to the same kinds of overall review. Our services are also directed to the public and non-public sectors, though the extent of those services differs for various reasons, most notably because of court determinations with respect to what the Federal and State Constitutions allow under the principle of church-state separation.

A decade or so ago, when enrollments in the non-public schools began to fall, the Regents and Education Department gave particular

consideration to new ways in which the Federal and State governments might be of assistance. The focus then was on such approaches as the apportionment of State funds to non-public schools for examination and inspection purposes and dual enrollment to permit students enrolled in non-public schools to take some courses in the public schools in areas like science. The question thrashed out at that time was under what conditions should public funds be used to help maintain a mix of public and non-public schools in the interest of ensuring educational diversity. Our response was that we would support legislative proposals in harmony with a set of specific principles. These principles are:

-- Such legislation should not jeopardize the welfare, stability, and adequate support of the public schools.

-- Such legislation should be effective in providing meaningful opportunities to children of lower income families who, of all groups, have the least options in determining when and where their children are to be educated, as well as to middle-income families feeling the economic pinch of higher tuition costs.

-- The support of non-public education must be sufficient to maintain a pluralistic system adequate in quality and economical in operation but not so extensive as to jeopardize the independence of non-public schools or dry up sources of private and philanthropic support or encourage organization of new schools with the purpose or effect of increasing racial separatism.

-- Such legislation should require accountability for public funds received, contain safeguards against increasing racial and social class isolation in the non-public schools, and insure against use of public funds for any sectarian purpose or function.

-- All non-public schools receiving public funds must be required to meet standards of quality prescribed by public authority, but the State should be involved as little as possible in the operation of non-public schools.

-- Finally, such legislation must conform to the principles of constitutionality already enunciated by the courts or have a reasonable prospect of being approved by the courts in the event of a challenge to its constitutional validity.

While some programs enacted in recent years were struck down by Federal or State courts, others are now helping to meet the special educational needs of students in non-public schools as well as students in public schools. I note by way of example services offered under provisions of Title IV-C and Title I of the Federal Elementary and Secondary Education Act.

In Title IV-C programs, non-public schools must be involved in the very beginning and through development, training and implementation. For instance, a public school contemplating a replication of a IV-C program must contact non-public schools in its district and include them in all of the replication activities unless the non-public schools do not wish to be included. A Title IV-C program in District 28 in Queens is illustrative. It is a basic skills program extending from kindergarten through grade 12 involving teacher training, curriculum development and implementation of a basic writing program. Among the participating schools are three non-public elementary schools. Another example is a program that involves intensive training in which classroom teachers participate in hands-on experiences in the development and

use of instructional materials for the teaching of mathematics. There is special emphasis on diagnostic/prescriptive teaching techniques. This program is coordinated through the Center for School Development of the Central Board's Division of Educational Planning and Support. Public and non-public schools work cooperatively for this program's implementation in eight community school districts.

Under Title I, a survey is done annually in New York City to identify students in non-public schools who would otherwise have gone to an eligible Title I school, and services are given to them at the non-public school they attend. This is a citywide program of the Central Board of Education involving 300 or so non-public schools. Small group instruction in reading and math is offered by public school employees. Also, community districts have money which they earmark for non-public school children to be helped by paraprofessionals assigned to non-public schools.

In addition to connecting the public and non-public schools with each other, a variety of other programs make possible important further connections between schools and community resources, among them cultural institutions, health delivery systems and various sources of job training.

Cultural Connections

A major focus of the Regents and Education Department is to strengthen connections among cultural and educational institutions throughout the State. Activities supporting the theme this year include enhancing the use of television for instruction, strengthening museum education programs, and connecting public and school library

systems. We need to bring our educational and cultural institutions more closely together to build a more cohesive and successful cultural and learning program for both children and adults. There must be a broadened and shared awareness of educational goals among our schools, colleges, museums, libraries, historical societies, archives and public television councils. We want to identify cultural resources in our communities and to develop stretegies for their more effective combination and use to meet the learning objectives of the schools and the educational objectives of the institutions. We seek to arrange our educational priorities to retain the richness and variety that mark New York's educational enterprise and its culture.

In New York City, there is a special opportunity to make these connections. Various programs are now serving students in both public and non-public schools, as indicated by these examples:

-- New York City AGE Project and the Metropolitan Opera House

Opera singers have residencies in two schools to introduce opera into the curriculum

-- AGE and Young Audiences

A Title IV-C grant enables actors to work with school children in a theatre arts program.

Title VII funding of the BETA Program (Bilingual Education through Art) supports residencies in theatre, dance, and music in bilingual classrooms.

-- AGE and the Museum Consortium

Collaborative efforts between the Bronx Zoo, New York Historical Society, New York Botanical Gardens and the Museum of

Natural History enable AGE school teachers to create an interrelated arts curriculum on the theme of birds.

-- AGE and the Theatre Dance Collection

An AGE Junior High School program with the Dance Collection offers dance instruction to students and through the residency concept, integrates dance into the curriculum. In addition, the school is the site for the Collections' entire performance season.

-- Henry Street and District One

Teachers from nine of the schools in District 1 attend the Center for an advanced program in curriculum development through the arts. The course offers graduate or in-service credit through Lehman College.

Non-Public schools with arts in education programs using community arts and cultural resources in the New York City area:

-- The Henry Street School - Alternate Junior and Senior High is affiliated with the Henry Street Settlement Arts in Education Program.

-- Under ESAA, a special arts project with the New York Foundation on the Arts involves the Queen of Peace School, Flushing, and Our Lady of Peace School, Brooklyn.

-- St. Joseph's Elementary School on 87th Street has an arts in education program which ties into the Metropolitan Museum of Art.

Health Connections

The objectives of the Regents and Education Department with respect to health education are to increase awareness of preventive measures and to promote greater health self-sufficiency among the public -- better self-care, increased ability to determine the need for professional help, and improved capacity to communicate with health-care professionals. To accomplish this, we must develop cooperative school health programs, using the resources of schools, hospitals and other community health agencies; and develop regional programs in school health with Health Service Agencies (HSA).

A significant advance this year is the interagency project financed by the Robert Wood Johnson Foundation to strengthen health education and services in elementary and secondary schools. The Foundation grant is to fund an initial demonstration project. We are seeking both State and Federal funds for additional demonstrations. The next one will be in New York City as soon as additional monies are secured.

The fiscal crisis and its impact on staffing, the dual administrative responsibility for school health in New York City and the other realities are well-known to us. But these realities do not preclude your providing more appropriate responses to the health aspects of the program.

Right now, within the very difficult constraints you face, three steps are urged:

(1) You should be assuring that health instruction is improved, especially at the elementary level. Health learning for children must

be appropriate in kind and adequate in amount if we are to have any impact on their future as informed health consumers and persons who can assume greater responsibility for their own health.

(2) You should be adhering to State Public Health Law to assure that all children in school are adequately immunized. The efforts in this school year are highly commendable under the leadership of City Council President, Carol Bellamy and Chancellor Macchiarola. There are still some weak spots, however, and these must be plugged.

(3) There should be better provision for emergency care of ill and injured students without reliance on hit-or-miss care.

I urge that you take leadership by:

-- accepting these areas as legitimate responsibilities with a higher level of expectation

-- assigning responsibility in these areas to appropriate staff; and

-- securing necessary in-service experience to assist staff to carry out the necessary functions.

There are many resources to call on for support. The Health Systems Agency for New York City with its 33 sub-area Councils (District Board) has responsibility for planning to meet the health care delivery needs of the City. This includes all aspects of health care delivery including health education and primary preventive health care, as well as some of the more complex health matters. I urge that you get involved in their activities -- at the very least become informed about them.

We are aware that there are many resources in the City interested

in improving child health and school health. There include many of the major health and hospital facilities, the voluntary agencies, and other interested groups. Most of them are legitimate and appropriate; some may be less so. I urge that you approach these groups which can offer support and assistance for you -- or at least to listen carefully if they approach you. The job is too vast and complex for schools to go it alone - nor is it appropriate for them to do so. I am not suggesting a piecemeal approach, but I am suggesting reasonable means to supplement and assist your efforts.

Employment Connections

In the area of youth employment and career preparation, I note the expansion of Federal resources and the use of those funds in programs which make possible appropriate educational and academic credit. Regents and Education Department activities have centered on assisting prime sponsors and educational institutions in implementing the Youth Employment Act (YEA) and Comprehensive Employment and Training Act (CETA). We have sought to assure that more funds are guided into educational programs and that participants receive full educational or academic credit for their training efforts.

We are pleased with a number of provisions enacted by the Congress this year which strengthen the role of education in the total CETA program.

-- Six percent of the money for comprehensive employment and training services will be provided through state vocational education programs of prime sponsors.

-- An additional one percent is available through governors for encouraging coordination and establishment of linkages between prime sponsors and educational agencies and institutions.

-- There is a definition of academic credit as it applies to CETA which relies upon state law, regulation, or policy.

-- The legislation requires that "a personalized employability plan" be developed for each participant with a concern as to what basic or general education needs might be required in addition to vocational or skilled training.

-- Prime sponsors on the general CETA program must make arrangements with state and local educational agencies, or post-secondary educational institutions for the conduct of employment and training programs.

-- There must be consultation with states concerning the delivery of general education, and all programs for inschool youth must be consistent with state educational standards.

Another important activity is to connect education with business, industrial, labor and governmental organizations. An exemplary effort to combine resources is occurring in New York City among the Economic Development Council, the Board of Education, the New York City Alliance of Business, the New York City Chamber of Commerce and Industry, New York Central Labor Council, AFL-CIO, governmental agencies, parent associations and private corporations. This is the Association of Business, Labor, and Education of New York City, commonly called ABLE, which has received support and encouragement from the office of Occupational and Continuing Education of the State Education Department.

The major thrust of ABLE is to close the gap between the learning which takes place in the classroom and the knowledge and basic skills needed for New York City youth to function as citizens, parents, employees, and consumers. Typical of the efforts of ABLE to acquaint the business and labor communities with outstanding programs in New York City high schools was the High School Recognition Day. Three hundred programs were submitted for evaluation from 85 high schools. Forty-five of these programs were given special recognition in ceremonies held at the Union Carbide headquarters. There were several benefits from this effort. The school community realized that business and labor are supportive of their programs, and labor and business have come to realize that there are many excellent programs provided in the New York City schools. This increased contact between students and the world of work encourages replication of excellent programs.

While ABLE involves public schools only, it should be pointed out that students in non-public high schools in the city are eligible for secondary vocational programs offered in the public high schools. They are also eligible to participate in the "After School Skills Program" operated in the public schools and supported by the Vocational Education Act.

Performance Levels

As we make new connections with resources outside the schools, we must also focus on the quality of the program in the schools -- the levels of performance that are expected and attained.

The expectations of the people for opportunities in education have

never been higher. Public opinion polls indicate this time and again. When expectations are not met, there is criticism. We must close the gap between expectation and performance.

The Regents and State Department of Education are now involved in a variety of efforts to raise the quality of elementary and secondary education. Procedures for high school reregistration are being improved. We are monitoring both in-state and out-of-state public and private schools serving handicapped children. Another major concern is to set appropriate standards for student performance in the foundation skills.

The requirements of passing Regents Competency Tests in reading, writing and mathematics are now established by regulation. But the standards, or degree of difficulty, of these tests are tentative. How well should a student be able to read, to write and to use mathematics in order to receive a high school diploma? The Regents will establish final standards at their February 1979 meeting, based on recommendations of both educators and the public. I urge your assistance in this effort at setting the right standards and invite you to our January Conferences in New York City on this important topic.

The educational system has an obligation to provide internal control of quality. There must be heavy emphasis on careful planning and evaluation by the schools themselves and on the checks our agency makes. Only through such efforts can we expect broad public support of education. We need to build confidence <u>in all education</u>. Confidence in the schools of one sector will impact on confidence in schools in the other sector.

This means we need to work simultaneously to be sure our public schools and our non-public schools are both as strong as we can make them.

AFTERNOON SESSION

THE EXPANDING ROLE OF THE SCHOOL

Stephen R. Aiello
President
New York City Board of Education

During the 17th and 18th centuries, American schools were essentially private or church institutions. Where they existed, these schools were few in number, the pupil population was selective, and control was in the hands of a few.

In these early years of our nation, the political forces of democracy and nationalism affected educational theory to such an extent that American leaders began to say that education in a democracy should be available to larger numbers of citizens. The public school movement thus took root and grew. And, with the growth of the cities and the increased pupil population, the duties and responsibility of school leadership became more demanding. The economic influence of commercial capitalism encouraged the development of practical studies that would prepare for a life of useful work. By the 19th century, the growth of political democracy, the expanding role of government, and the growth of nationalism in the United States, contributed to the conception of public education that took root and flourished in spite of some opposition. Agitation for public education was significantly aided by the shift from an agrarian to an industrial society. Cities grew along with organized labor and the influx of immigrants.

For the first time, free public education became generally avail-

able to the working class and to the growing number of immigrants. Free public education for most meant the rudiments of learning. At that time, 8th grade graduation was an accomplishment. Poverty and the unskilled labor market needs easily allowed drop-outs to be absorbed into the work force. As low level employment opportunities decreased, the role of education became more important.

The schools of today are not only the product of these forces in history; they also exist in a complex, largely urban, and pluralistic society. Further, there is the influence of world-wide ideologies and practices upon today's schools to a greater extent than could be imagined during the last century. In today's world, the questions of organization and control of American schools have new meanings and require fresh analyses.

To be sure, contemporary issues should include the tasks and responsibilities of the school. Should the school emphasize intellectual, social, personal, or other objectives? What priorities should be established for schools? In what ways, and to what degree, should the purposes and programs of the schools be related to the purposes and programs of the home, the church, community and social agencies?

I don't believe that it is coincidental that as our students are expected to remain in school for a greater number of years of formal education, the expectations for the role of the school have also expanded.

It is quite clear that schools are being asked to perform functions and assume responsibilities which used to belong to other institutions in society.

We look to our schools for a moral and social center that has been lost elsewhere.

As church and religious activities have declined, education in morals and values rested with families and teachers in both public and non-public schools. As families have undergone severe changes, with single parent households now common and the possibility of more than one father or mother figure in a child s life, value education has been further transferred to the school. Our local and national legislatures have determined that breakfasts and lunches should be provided to eligible children in our schools. Public health agencies have looked to the schools to enforce innoculation requirements. Efforts to free our society of racial conflict and to ensure equity among all our people have by default focused on our school communities and their young populations. School boards and school personnel are being held to standards which follow our nation's beliefs and Constitution but which are not met in other major components of our social and economic life, such as in housing, in private sector employment, in the financial world and the criminal justice system.

Schools now are responsible for 16 years of a youngster's life on a compulsory basis. This is an expansion both of what the public initially expected of education as well as the scale of the endeavor itself. A high school education for all as a right and a requirement is relatively new in our own history and one forgets that child labor was a common practice at the turn of the 20th century.

-- We ask for schools to educate and to educate with a calculable certainty - we ask accountability and improved

results, requiring statisticians, technicians, evaluation specialists, etc., all untraditional additions to the school environment.

-- Our schools are asked to specifically prepare students for a productive adult life. This means an ever-earlier orientation of instruction to the world-of-work, to inculcate appreciation of the work ethic in life's early formative years.

In connection with this, our schools have expanded their parameters outward to envelope more and more the private sector and voluntary organizations who can bring the world-of-work close to the teacher, the student and the curriculum. The classroom has expanded and is now often shared-time in an office, a project site and a non-school institution.

-- Schools now educate for a spectrum of individual variety and ability. They are also educating and mainstreaming the physically and emotionally handicapped, which had not been previously expected. They address overall needs that had been served in the past only by highly specialized medical personnel or not served at all. Schools are now for all children with virtually no exceptions made. No child is denied the efforts of our teachers and programs to address their needs, whatever they might be. The schools' expansion has thus been truly universal.

-- This is a catalog of historic significance for our society, and exemplifies the highest ideals of our nation. We here today know these expanded functions and objectives well.

We have all accepted them. We have indeed embraced them and welcomed them as challenges.

-- Our efforts have, I believe, been imaginative and genuine. Ironically and sadly we have strived to increase our effectiveness in all these areas even as our fiscal resources to support the efforts continues to be cut back.

In that effort to increase our effectiveness, educational "experts" carved out "turfs" for more and more facets of the burgeoning educational process and protected those areas fiercely -- against all comers. In some instances formal education became self-isolating with self-limiting areas of responsibility. We accepted the premise that schools could be used to combat society's deficiencies in housing, health, and social services.

I strongly feel that in the continual expanding role of the schools we moved away from some of the mandates we are responsible for; in our eagerness to embrace high ideals, we lost trust and security. We neglected to secure for our children that which is basic and necessary in the learning process and our responsibility to them. Instead we concerned ourselves with putting the icing on their educational cake. Were we trying to be all things to all men? I think we are!

Rather than suggesting that we now attempt to limit our role--although I agree with many dimensions of the "Back to Basics" movement--I would remind my colleagues that instruction takes place in many places other than the classroom. We must, therefore, equip our communities to share with youngsters alternate methods of formal education. We must develop policy managers who can look at the total mosaic of the educa-

tional process. But I must pose a serious question as to what role does the public want the schools to play in the next ten years and beyond. Should we remain in the business of supplies, food services, transportation, health and other social fields? Are we to be the only institution attempting to effectuate social change? Should we dedicate ourselves to the position that the greatest good for educators is to teach people to work together, to understand each other, and in the final analysis, to live together? Or, should we take the position that the mastery of learning skills is our only mission and discard all the rest?

I think that the answer lies somewhere in between these two extremes. Perhaps the role of the school in the future should be one of serving as a nucleus for a network of other institutions and agencies which provide other than basic educational services to children. And through these linkages, to have all of our governmental agencies that service the child, including the family and the church, play a more active role and take greater responsibility for helping the schools educate, what John Dewey called, "The Whole Child."

Thank you.

CONFERENCE WORKSHOPS:

THE PARTICIPANTS ADDRESS THE ISSUES

Technology in the Schools

The Provision of Social Services in the Schools

The Environmental Crisis and the Role of the Educators

Prepared and Edited
by

Donald Edward White

CONFERENCE WORKSHOPS:

THE PARTICIPANTS ADDRESS THE ISSUES

The Conference workshops provided an opportunity for the participants to discuss their views on the various topics raised in the speakers' presentations. Below are some of the thoughts expressed in these sessions:

TECHNOLOGY IN THE SCHOOLS

Ralph Brande

Since about 1962 or so, we have seen a whole host of programs. We had talking typewriters. God knows where they are stored right now. We had computer assisted instruction. We had PLAN. These all took a tremendous investment of money and time. Now you cannot locate them.

Is this an indication of failure? Is it an indication of a lack of foresight?

Where do we stand with technology? Why try to sell us technology now, when we seem to have had a taste of it, and it has been dissipated?

Robert Marker

Those were very early efforts. Some of those efforts are still alive and well elsewhere.

I would submit that Dr. Schure's comment on the political process and the involvement of people, as well as the meeting of real needs, determine whether a particular use of technology survives.

Benjamin Israel

Those early efforts were research and development efforts. Seed money was used. The funding came from the Office of Economic Opportunity (OEO), and monies from OEO were not allocated for strictly educational purposes, but for community oriented purposes, as well. This had a double barrel effect and made the issues much more complex.

Another important point is that most of these efforts were for remediation. They were oriented toward children who were already experiencing failure through conventional methods and they were designed to be "teacher-proof." Teachers were under tremendous fire during those years. Many of the programs were designed to bypass the less than effective teacher. . . .

I am not putting down teachers by the use of the term, "teacher-proof." I simply want to suggest that this was part of the hidden agenda.

Mario Raimo

The key thing in marrying technology and the concept of humanism that we bandy about is the attitude with which the technology is introduced. The reality is that we have large companies coming aggressively into the schools to sell their packages.

One nightmare that I think was encouraged by this situation was the notion of "performance contracts." The concept was to make the program "teacher-proof." The idea is that the teacher cannot "interfere" with the operation of the program. I think that is what most of us rebel against.

It is not the technology, but the attitude associated with it

that, I believe we should be most concerned about. Are the machines being brought in to save money? If that is the reason, they will not work. Are the machines being brought in to make the teaching staff less effective in organizing? That is a motive which occurs. If that is the motive, they will not work. If the motive is to turn out people for some pre-designed purpose, the machines will not work, either.

Robert Weinberg

Like most educational practitioners, I have a skepticism about technology, which I think is a healthy skepticism. I would like to identify problems that I see on the horizon.

We are facing a kind of information overload. There is a kind of non-discriminatory aspect to the gathering of this information. I use as an example, the ERIC system. If you have ever had the experience of using it, you know you get a lot of worthless material. You may think you are saving time by having it, but you also make somebody sift through all the reams of information that it produces, and I do not know what kind of gain this is.

A second problem I see has to do with the nature of a lot of this technology. It panders to the tendency that young people have to instant gratification. If a problem cannot be solved in five minutes, they may not stay interested. That five minutes could be down to ten seconds in another decade, because of our increased dependence upon technology. This seems to permeate so many of the things children do, from the doing of homework to the solving of life problems.

I am also fearful of the dynamics that do not occur when the child is faced with a machine. We have so many instances of depersonalizing

our lives, that children are missing many basic group experiences. Children do not even attend auditorium programs any more. We seem to be going further and further in the direction of breaking people into separate units.

A final problem I would like to point out is that possession of the technology often determines the direction that education takes, instead of the reverse. In other words, having the tool to do something makes us do that thing, whether or not it is necessarily good for the child or good for the educational process.

Simpson Sasserath

We are all talking as if our schools have been remarkably successful. We are in a state of desperation. Without getting into the issue of blame for this situation, I would like to point out that certainly the schools bear their share of the responsibility for improving the learning process.

We must do everything we can to find out what can possibly be done for children who are not learning. Technology may be another important tool we can use. I am interested in the things technology can do to expand the abilities of the effective teacher.

THE PROVISION OF SOCIAL SERVICES IN THE SCHOOLS

Stephen Aiello

There is a process now going on in the Department of Health, Education and Welfare in which regulations are being drafted on the use of Title I funds for disability and special education. This constitutes a broader use of these monies.

I think this is dangerous. Parents and children will be set up in a competitive position for these funds, when the programs they seek in all their respective areas might be worthy of funding.

Pam Levin

The Citizen's Committee for Children was involved for two years in a study of special education in the City of New York. This brought together from the State the various Commissioners of health, mental health, education and so on, and their New York City counterparts, plus HEW people working in the same area.

It was interesting to us that these people had never talked to one another before, and they were not even clear about the boundaries of their responsibilities in the educational process. One of the various recommendations made by the task force on which we served was an increase in linkages among the various agencies and the various services that are supposed to be provided for the children.

We now have a new Council, headed by Eileen Margolin, called The Council for Children and Families. What they have begun to do has been to bring together the various heads of departments with a view toward focusing on the needs of the children.

I believe that if we could use ourselves as a power base, perhaps we could get together and try to work for the creation of a counterpart on the city level.

Rev. Robert Kennedy

Looking at the education budget, it is clear that their priorities are not health and welfare. The background of their lobbyists and

budget planners also indicates priorities, and this, too, suggests the same thing.

If we have planners that function with the kind of background that they currently have, we are going to have policies based strictly upon educational practice. If health and welfare get involved in it, it will be subordinate to the educational process. People will be given food in breakfast and lunch programs, because they do not learn if they are hungry, not because they need it for good nutrition.

This seems to be the dominant philosophy behind most budgets and most educational proposals. If we are really serious about the whole child, we have to start utilizing people who look at the child from the more holistic point of view in our planning processes.

Donald Marcus

If recreation is going to have to come out of the school budget, I would prefer that the educational budget not be diminished by the use of recreational facilities. Monies for recreation should not have an education imprint on them. Their benefits should be for all children, regardless of whether they attend the public schools.

A concern expressed by many people is that there are community school boards that are controlled by people who do not have their children in the public schools, and who are going to channel monies from educational concerns to recreational purposes. I do not believe the issue of how much we allocate to education should have this extraneous factor imposed upon it.

Rev. Robert Kennedy

Whatever our desires are, this is a very strong political football. I would say that probably at least ten of the local school board elections in Queens and Brooklyn hinge upon recreational issues. This is because the Board of Education has the prime recreational space in the communities. Unless they face up to the fact that that is the only place that is there, and also that they have discretionary funds available for this purpose, people are going to get on that school board with that purpose alone.

If you do not solve that problem, you are going to take education and embroil it in a political fight. Let's get some sort of a compromise, so that we do not have to have the kind of political fight that could develop over that. If the recreational space in the schools in Queens were utilized more fully, you would have a great deal less fighting.

Ralph Brande

We are constantly talking about closing down schools because they are under-utilized. Yet, if you are able to put some social agencies that are supposed to serve the people of this city into the schools you would really make the schools part of the community. Then they would really become mini-HEW's.

THE ENVIRONMENTAL CRISIS AND THE ROLE OF EDUCATORS

Alba Zizzamia

Technology is spinning out of control. It has happened in military technology. There is no question about it. It has its own autodynamics. Nobody is controlling it.

Maybe we ought to start thinking about the direction we want technology to take.

Rev. Emmanuel Hatzimmanuel

Our children have to be told that the problems that are going to have to be faced are going to have to be solved as citizens of the world. We have to understand that; our children have to understand that. We will not be able to solve everything as Americans or Chinese or Russians.

Our survival is preserved because of our arms supply. Is this the mode of survival for the future?

Sister Frances Heerey

What I hear being said reduces, I think, the need for all of us to teach the respect of life -- not only human life, but also plant life and animal life. After that follows the respect for materials. This is being taught today, and the children are responding to it. That is where I think educators ought to be in the forefront: to take this world and conserve, preserve.

William Caulfield

I remember Sputnik reasonably well. It got everybody scurrying into science, until the curtain fell when a man landed on the moon. Those years were also years of great ferment and activity. Students were put in the direction of increasingly greater achievement until I think we may have frustrated parts of a whole generation.

I am not so sure that when we talk about education facing the 1980's and beyond, education can plan that far ahead. I'm not sure

that the good sense of each increasing generation of teachers does not dispense with the worries that we might have.

Alan Mirwis

I think that, by and large, educators have become one of the most apolitical groups in our societies. The teachers' unions are active, perhaps, but only in a limited manner. Teachers do not want to "contaminate" themselves by running for office or by ringing doorbells.

I see some of the people who are running for office, and I am freightened. For the past twenty years voters have been saying to themselves, "Who do I hate less?" Yet these officials are the ones who are given billions of dollars to spend, who pass regulations and so on.

I do not know whether educators are ready to engage the system. This is one area where we might get what we deserve. Can we do something about as mundane an issue as getting ourselves involved?

WORKSHOP SESSION A

THE CHILD AS ONE OF THE CONTINUING FOCI OF EDUCATION

Dr. Alvin I. Schiff
Executive Vice President
Board of Jewish Education
of Greater New York

The session revealed a strong dichotomy of views concerning the role of technology in education. Much of the discussion could be characterized as a dialogue between the humanists and the technocrats. It was, in essence, a conversation between the "back to basics" people and the technology enthusiasts. Several participants stressed the need to bridge the gap between the feeling that there must be a humanistic approach to children, teachers and parents with an understanding of the value and utilization of technology.

Our session experienced the challenge of technology in action. Here we were, Alvin Schiff, the moderator, in a frontal teaching position behind the "teacher's desk," and the participants (students) seated facing the "teacher." One microphone was placed in front of the "teacher" and another was taped to the floor in the middle of the room for use by the "students."

It was obvious that this "machinery" was there to record the session. Now how could it be used without inhibiting the free flow of discussion. The microphone could either be a facilitator or inhibitor. Said "the teacher" to the "pupils," "I'm inhibited because I have to talk into the microphone on my desk. I have to learn how to relate to it. Each of you has to get up and talk into the microphone on the floor, introduce him-

self or herself to the machine for recording. This process obviously inhibits a natural exchange of views." It was agreed that this would encourage participants to make speeches for the record rather than engage in natural conversation.

Within our group we had to learn how to try to cope with this challenge of technology. In the first instance, we were hopeful that the machine worked, and you will find out from the record whether it did or not. To meet the challenge, we decided to uproot "that gimmick" from the floor. We unplastered it from the carpet and made it portable and used it as a mobile microphone. While this procedure removed the necessity of each participant stepping forward to the microphone, and relieved the formality of the classroom atmosphere, the very fact that the "mike" was there caused several participants to make speeches rather than have a natural exchange. In fact, when one member of the group took the microphone in his hand, he became an entertainer and for a moment I became his straight man. This levity helped create a very informal and friendly climate in the room. In a sense, this demonstrated the positive use of technology. Throughout the session the passing of the microphone from one "speaker" to another seemed to be an important part of our proceedings.

The overriding feeling in the group was for the need to consider the primacy of human resources rather than the technological facilitation of educational process. On the other hand, it was agreed that serious attention must be given to the challenge of technology.

Towards the end of the discussion I made the following observation to the group. The subtheme of our session was "the child as one of the

determinants of the curricular use of technology." This theme was treated in my three minute introduction. But after an hour and ten minutes of discussion, no one in the session had really addressed himself to this topic. It was agreed that this was because of the strong feelings about the use of the machinery itself - its actual and potential threat, on the one hand, and its real and potential value, on the other. This bi-polar posture was the frame of reference for the following points made during the discussion.

1. One of the key problems in the use of hardware is the depersonalization of the teaching-learning process. The challenge here is to overcome the depersonalization (some called it "dehumanization") while benefiting from technological advances. How do we insure that the needs of children and parents determine the direction of the education process and not the technology? How can technology be made to serve education and not vice versa?
2. Educators are basically conservative and they have to learn to adapt to new technologies. Some participants felt that they should remain conservative and not "rush" to utilize new technology. Some stated that this would save much needed funds for other purposes. The preponderant view was that teachers have to learn to adapt. Therefore, there is a need for teacher training.
3. The fact that the machinery did not work all the time or broke down (several examples were given) was considered a serious problem by those who used hardware. Teachers are unable to diagnose the technical problems or repair the hardware. Their training should include a knowledge of the machinery.

4. The four teachers in the group all noted that the role of the teacher in utilizing technology is overlooked. The machinery is given to or purchased by the administrator and then "handed" to the teacher. "Where is the input of the teacher in selecting the hardware and software?" they asked.

In a similar vein, the participant representing the parents asked, "Where is the input of the parents?" Some felt that there should be parent training as well as teacher training and subsequent involvement of both groups in the decisions regarding the use and purchase of hardware and software. This is needed particularly in light of budgetary constraints to insure that the equipment purchased will be used. Often large expenditures are made for equipment that is hardly used, or not used at all. Amongst the examples were the non-utilized language labs and programmed instruction materials.

5. Children are accustomed to professionally sophisticated technical presentations on the movie and television screens. A classroom can't match this kind of technological proficiency. This is sometimes a problem. New materials should not be used unless adequately tested for school situations for which they are being purchased.

In summary, throughout the discussion there were questions raised about need for technology. Education might be effective without technology. But technology can make it more effective. It can help deal with individual differences and help children learn. It can reinforce the role of teacher and parent in the educational process. It is

obvious that the machine cannot replace the teacher. How to utilize technology and insure a human approach to pupils is the critical question. The real challenge of new technology is determining how and where it can best serve the purposes of education. This challenge, it was felt, was still largely unmet.

WORKSHOP SESSION B

THE ROLE OF TECHNOLOGY IN COMMUNICATING WITH THE CHILD

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INTRODUCTION

Unlike the earlier Workshop report, we experienced no inhibitions or physical arrangement difficulties with the intruding technology in our Workshop environment--the microphone and tape recorder. We simply ignored this alien presence. This underscored a pet personal conviction that technology, to be effective, should be a servant not a master. Hearing the chairman's report on Workshop Session A, I believe we could have held a single session as we covered many of the same concepts and topics in Session B. If I omit any key issues in this verbal report of our activities in Session B, I have promises from several of the participants to immediately correct and/or elaborate on either my errors or omissions. Indeed, using the dual technologies of the ball point pen and prepared paper, one participant in our group discussion prepared eleven pages of notes on the proceedings. Assured by this dedication to accuracy as a backstop for any balls I may bobble, I believe I can reconstruct comfortably the general tone and key issues covered in our Workshop session.

As an initial exercise, our group discussed whether we should be searching for consensus as a means of reporting back to this larger body. I don't mind sharing with you that I immediately anticipated a "no

progress" agenda if we pursued such a course of action. Having had a chance to chat informally with many of you and listening to the earlier presentations and responses, I perceived the existence of a potential dichotomy--"Rabid Firebrand Technologists" on the one hand and "Warm Traditional Humanists" on the other. Experience proved otherwise. Either because of a willingness by all parties to look at issues objectively or because of a willingness to accommodate a very broad perception of the various topics discussed, the electricity of confrontation was kept to a minimum during the debates between the zealots on either side. However, just to be safe, we took no votes and I accept the full responsibility for any misinterpretation in the reporting of our group's activities.

As a background for our discussion, we reviewed some basic facts of life regarding technology in general. We recognized antecedents of modern technology in the fact of "firemaking" and the realization of the "wheel." The electric razor, and the utility of electricity in general, are efficient modes of technology when intelligently applied. Our meeting place itself evidenced bountiful examples of high level technologies--indeed, this meeting, this great University, even the New York community could not exist without support technologies--one fundamental example being the vertical lift or elevator and the power to operate it.

We took time to further examine the fascinating point made earlier by Dr. Schure, after 799 generations of human existence, we in the 800th are privileged to participate in the generation that has the use of the electric motor. The perspective is one not only of experiencing an intensification of technology, but of an acceleration of available technological choices. If there was an identifiable general theme to our

discussion, it was this: individual personal attitudes and choices for use among the available technologies governed whether success or effectiveness would be achieved for that specific technology.

THE AGENDA:

CAN MACHINES TEACH? WILL TEACHERS BE REPLACED?

We agreed that machines can "teach." However, our discussion centered on the degree of effectiveness or the depth of intelligence available through the machines "teaching." We asked the question, "Can a machine teach thinking?" Without fully defining what was meant by thinking, we accepted simply that a high order of cerebral-logical activity was implied. An example of "high order" was given in that just this year a chess playing computer actually defeated (in only one game) a grand champion chess master. At the opposite end of the scale, an example of a $22.95 type device was cited as helpful in the timing, pacing, if you will, in student practice of reading skills. Note was taken that the motivational aspects of the human teaching-learning relationship were either different or missing in machines; they are absent the concept of "heart" and they just are not very good at snuggles and hugs.

Therefore, our group did not expect teachers to be replaced by machines. Rather, technology should facilitate, support, and assist the educational process as tools to be used by teachers, the right tool at the right place at the right time.

ARE WE LOCKED INTO BOOKS? THE PORTENTS OF MICRO-PROCESSORS.

We believe that books have a proper place in the scheme of things. They are cheap to produce and distribute. Relative to current hardware capabilities, however, machines may indeed induce obsolescence in the

book business. We are safe for the moment from the full impact of technologies such as the videodisk and the mass image storing capabilities of the microfilm and the digital device industry. Our security blanket is the fact that the "software" adaptation of concepts and strategies in information exchange has not kept up with the explosive hardware development. While we agreed that the book still has a place, we also recognized that the role played by the book, i.e., information storage and dissemination, is the most easily machine emulated portion of the teaching/learning process. We just have greater hardware technology today than we have curricular wisdom to take advantage of that hardware.

We did discuss the portent of microprocessors--the little control units that let you preset your microwave oven to do your exact bidding or let you record the TV programs you preselect for a week's time. About the size of your fingernail, they can be harnessed to many tasks from facilitating the work of secretaries (the new term is "word processing") to making possible the ping pong type of game in homes, bars, and arcades. In addition, these units are honest to goodness full tilt computers. The fingernail size chip costs twenty-five dollars and does the work of central processing units costing a half million in the 50's. Only these little guys do it faster and perhaps better. (Editorial note: Between the time of this statement and the time the statement was edited for publication in the Conference proceedings, Zilog Corporation announced an approximate 50% reduction in the Z80 computer chip from $25 each to just over $12 each.)

The technology exists for cost effective information processing and management. If we are to use these resources, they must be planned,

organized, and executed by professionals like yourself. Until you do so we will remain fixed in our abilities to respond--like the teacher who possesses but does not use her sixteen millimeter sound film projector because it is too clumsy a task (sic) to load it properly.

FADS AND GIMMICKRY IN EDUCATIONAL TECHNOLOGY.

We looked at fads and gimmickry in education, threw up our hands and said, "Yes, there's a lot of that going around! Our school storage cabinets and basements are full of examples of technology not carefully engineered for classroom use." One sad casualty noted was the language laboratory of the 60's. Hard to maintain? Difficult to use? Out of vogue? Then at our luncheon today, Dr. Max Weiner, back from six weeks in Japan, a high technology industrial society, tells us about a successful use of intensive language laboratories directly tied to student responses and on-line computer analysis. As usual, people and their motivations probably account for the difference. Japan has a large population of high aspirant individuals and their massive industrial output requires worldwide marketing, of course, in many languages. Thus, a strong urge to find a better way to do a big job faster. Presto, a successful language laboratory.

Under the category of fads, the point was made that many innovations experienced success merely from the effect of change rather than the result of technology. Hawthorne effect otherwise known as halo effect. If that is the case, I argue, don't throw the baby out with the bath. While halo effect causes difficulty in measuring the ascribing cause and effect, if it correlates well with positive change, we should deliberately use it as a technology per se.

With apologies to all present, since there are so many here representing the Christian Church, the halo approach would appear to be an especially appropriate application of innovation.

LEARNING TECHNOLOGY IN THE HOME.

Some of the alienations, some of the disastrous problems faced by our schools, particularly our inner-city schools, come from social changes in homes and communities. Some also come from our professional inability to respond as an institution--the institution of schooling. Briefly, when students are not learning as much as they should, or as much as we desire, the school must respond. But so, too, must the home and the community respond. For instance, a major technology exists, much tried and much talked about, but yet to be harnessed effectively in broad educational application--television. Many believe, simply because of the large investment of student time, in any analysis of alternative options associated with TV, that other positive pursuits suffer outrageously. An appropriate, but rare involvement, of the home in the use of TV as education vis-a-vis entertainment, is direct parental planning, and joint response with children, to specific existing program content. In the long view, the videotube represents an inexpensive medium of interaction with homes that can also be wired for general information processing. Adults and children can bank, shop, study, play, and work through this simple device. The fact that we don't seem to need to or want to is not the fault of the technology. It exists.

Probably the manner in which we will eventually get our introduction to these capabilities is through electronic games rather than

through less frivolous institutional uses. The stock of small inexpensive electronic games manufactured for the coming holiday season are either completely sold out or hard to find. Manufacturers of hand-held spelling, math, logic, and language tutorial games, as well as "pong, tank, starship, shoot out, and battleship" type video screen games had difficulty in meeting the demand this year. As demand increases, we may even find electronic technology in our schools someday.

WORKSHOP SESSION C

THE SCHOOL AS THE LOCAL HEW?

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We had a topic that had no questions posed to it except the first question -- the school as the local HEW? -- and that really was the only question because everything else seemed to be things that we are either doing or we should have been doing, or we will be doing -- health services, social services, recreational activities and continuing education. Among the first comments made in our group were, "What is the function of the school? What is the function of the school to society, because the school is really the only place in which we can reach all children in our society." Steve Aiello alluded to this in his opening remark to us this afternoon when he talked about the schools in the 1800's, a time when schooling was a preparation for work in the factories. If you are interested in some background on that particular period and the function of the schools, I suggest you read a book by Dave Tyack, of Stanford University, called, "The One Best System," which would give you some insight into many of the problems faced by schools.

It seems that we are reinventing the wheel. Well, no, actually we are putting new spokes into the wheel, because so many of these problems were discussed seventy-five or a hundred years ago by the leaders in American education. We tried to arrive at a consensus as to what the roles of the schools should have been or should be. Some of our pan-

elists decided that we ought to be offering more services to the youngsters. They felt the name of the game was dollars. They stated that we have a very bad situation in the schools and are unable to use federal funds as best needed. At that point, Steve Aiello indicated to us that he had made some efforts last year in behalf of the twenty-eight largest school systems in the United States to see if they couldn't get some agreement as to a different mix of tax levy money and Title I monies. He was requesting co-mingling of the monies, but that he had met an absolute stone wall in Washington in these discussions. He indicated that number one, the answer was "no," because you had to have comparability under the law -- even though he didn't think the law was written in stone, and number two, the fact that there were new draft regulations for Title I funds which would extend their use to areas such as special education, children with disabilities and so on. Regulations which, as Steve pointed out, would now be setting parent against parent for the limited funds available to many of our schools, because the special ed parents would now be fighting for Title I money. The parents of the educationally disadvantaged youngsters will also be fighting for the limited funds and that what we might witness would be a splitting of the ranks of parents when we should be unifying the ranks.

It was pointed out by a member of the group that if you examine the budgets of the school systems and if you examine the budgets of the health and welfare agencies, you would probably find an overlapping of large sums of money that are available to children. In education, he felt that we have used the money for the education of the children, and there seemed to be a doubt in his mind as to whether that was a valid

purpose for the use of all the money. He had the feeling that some of that money should be used for health and social services. At the same time within those other budgets there were sums of money which, as another member pointed out, could be used for school children. However, when the budget squeeze comes in any agency, one of the first areas hit is the funds available for supplementary services to the youngsters, in order to make up for the deficiencies in what they consider the vital parts of their budgets.

This really isn't helping the youngsters in school. It was pointed out that the reality of the dollar cannot be minimized. That one of the problems we have is that there are so many forces, all seeking to use the same dollar. It was stated that in recent years these dollars have been very limited. Once we are put in competition for the same dollar for all of these necessary services, each of the services suffers and none of them really provides what they should be for the children.

It was pointed out that the first priority of the schools, both public and non-public, was to provide the necessary help to teach the child to learn -- that was why the schools were there. After carrying out that purpose there had to be a unification of our efforts to bring in the necessary funding for all those other vital services. An example was given of how good ideas in Special Education went right down the drain because of the lack of funding, the lack of trained personnel, and the lack of supported services. In their haste to do what they thought was good, because of lobbying efforts of special interest groups, our legislators in Albany and Washington came up with laws that have to be implemented yesterday with the funding that would be provided down the

road two, three or four years from now in any significant amount to really make impact on the schools. It was stated that when you had public law 94-152 thrown at you, or you had the state laws thrown at you, the regulators weren't interested in where you got the money from, they just said, "This is the law, it has to be done. Here's the regulation of the Commissioner, here's a letter from HEW, and our job is to see that you follow the law. Your problem is how you can afford it." Unfortunately, that's the way it's always been in education. I think back to several years ago when the City Council concerned by problems in the busing of youngsters in Special Education, determined that every Special Education bus had to have a matron to supervise the youngsters. Their resolution became a local law. No funding was provided and nobody told the Board of Education where the money was to come from. Since then the necessary dollars have had to come from some other part of the educational budget. One of our panelists felt that much of our talk about these needed health and welfare services was kind of a pipe dream. He was very concerned over the fact that in HEW we weren't paying much attention to the "E" -- to the educational part of it. He urged that our resources and our energy as educators should go into the education of the kids.

There was no doubt in any of our minds that many of us were reacting out of frustration because of our inability to do a job we know has to be done; that is to provide not only for the education of the child, but also for his health and general welfare. Steve Aiello did point out to us that a very interesting model exists in several cities outside of New York and also in one of our local school districts and

Julia Richman High School. The schools are used as a mini-community to bring in health and welfare services and the broader community into the schools. This particular program which is one of the pet programs of Rosalynn Carter is functioning. He said that it's only costing $15,000 per child being served. Many of us are thinking that if they gave us that amount of money to operate the schools, we could really do a job and provide all of the necessary services.

In summing up it was generally agreed that there is an erosion of health services in the school. Indeed, as one person put it, most of the health services have disappeared from the public and non-public schools today. The schools have assumed by default, if in no other way, all of those things that formerly were being done by other agencies. We do it because we are interested in the children, because we are concerned professional educators, and because we know there isn't a lot of money coming down the pipe. The children are going to continue needing many of these services and somehow or other we are going to have to find resources internally to do it. Finally, if groups like this can't unite our various organizations to put their collective muscle together, then nobody can do it. The plea was not to leave here and say, another afternoon, another discussion, but to leave here in the expectation that Dr. Lachman is going to call a meeting again of all of the groups involved to say, "Now how do we cooperate, how do we join forces to exert pressure just like every other lobby exerts, in order to get what is needed for our children."

WORKSHOP SESSION D

EDUCATION AND SURVIVAL

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The participants discussed how educators on the elementary and secondary levels of education deliver the following kinds of facts to their students. As impartial observers or as involved and somewhat concerned if not frightened and sometimes angry citizens?

ENERGY

By the year 2025 the known global oil resources will be depleted. In 1978 the United States used 32% of the world's energy. By 2300-2400 the world's coal resources will be exhausted. The present resort to nuclear power plants came about only after the Price-Anderson Act removed 99.4% of the potential liability from the insurance companies. The nuclear energy "bail-out" presupposes that the waste products can be stored safely for 25,000 years - which assumes no earthquakes, wars, human mistakes and so forth.

POPULATION

1,000,000 extra humans populate the world every five days. That's 70 million more humans per year. The earth keeps 3.7 billion humans alive right now. By the year 2000 it will be expected to house 6.5-7 billion humans. By the year 4000, the staggering figure of 150,000 billion. Right now the United States has 225 million people; by 2000, 275 million. India has a population of 650 million; an extra 14 million

were added this year; by 2000, 935 million. In 1947 it was almost where the United States is at now - 250 million. By the year 2000, it is predicted that Bombay will have 38 million, Madras 23 million, Calcutta 19 million. In 1978, 73% of India's city population earned $55 per month. Since President John F. Kennedy died in 1962, the world's population has doubled. In a city like Lima, Peru 60% of the 2 million population is under 14 years of age.

The first reaction of educators to this kind of data seems to be caution. Beware of creating a crisis atmosphere. Today is the tomorrow we worried about yesterday and it did not happen. Not a crisis atmosphere but a thoughtful atmosphere should be created - one where positive alternatives are discussed. Educators should not become propagandists.

POLLUTION

People are now familiar with the hazards of DDT and the black lung disease of coal miners and cancer among the early uranium researchers. But what about the oxides of sulphur and nitrogen that are being released into the air all around us from coal and oil-fired units? Not only our air but our waters have absorbed factory outflows, herbicides, insecticides, fertilizers, animal wastes and human residues. From oil spills in our oceans to fluorocarbons in our ozone atmosphere we have gone ahead with technology at the expense of our earth, water, air, and people. All in the name of progress and the "gross" national product. We may even be overheating our earth with a resultant melting of the polar ice caps and the inundation of much coastland such as the whole State of Florida.

Educators agree that they have a duty to offer a critique of certain

aspects of the "American way." Values clarification, for instance, can serve to put some of these issues in a better perspective. But still there is an ambivalence about bringing politics into the classroom. Teachers mustn't succumb to fatalism or alarmism.

INFORMATION AND TECHNOLOGY EXPLOSION

By the age of 18, children will have spent 20% more time watching TV than attending class. The average American is exposed to 2000 advertising messages a day. Eighty-nine percent of Americans watch TV every day. The average home watches it six hours a day. At 8 p.m. every evening an average of 72% of Americans are watching TV.

Educators are willing to admit that our society does need some proper controls but they still fear contaminating the classroom with politics. They admit that they tend towards a conservative approach. They recognize that prophets may teach the truth but that they are not so well received. Overall they feel that futurism is a doubtful science.

When polled at the end of the discussion as to whether they felt environmentalism should be: 1) created as a separate curriculum strand equal in importance to Social Studies, English and the like; 2) kept within the various strands of Social Studies, Health Education, etc., as it now is; OR 3) ignored totally, they voted five for separate curriculum, fourteen for status quo, zero for ignoring.

When faced with a question on what tonality that Environmentalism should stress, however, the emphasis shifted: six felt it should be taught as objective liberal arts information, whereas the remaining ten felt it should come across definitely as a matter of political immediacy.

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APPENDIX B

CONFERENCE PROGRAM

9:15 - 9:45 a.m. — Morning Plenary Session

The Child, the Teacher, the Machine

Speaker: Dr. Alexander Schure, President,
New York Institute of Technology

10:00 - 11:30 a.m. — Morning Workshops

Session A: The Child as one of the Continuing Foci of Education

The child's needs as one of the determinants of curriculum.
Individual differences and ways children learn.
"Back to basics" and educational innovation.
The future role of parents and community.

Chairman: Dr. Alvin Schiff,
Executive Vice President,
Board of Jewish Education of
Greater New York

Session B: The Role of Technology in Communicating With the Child

Can machines teach? Will teachers be replaced?
Are we locked into Books? The portents of micro-processors.
Fads and gimmickry in educational technology.
Learning technology in the home.

Chairman: Dr. Robert Marker, Vice-President,
Westinghouse Learning Corporation
Pittsburgh, Pennsylvania

12 Noon — Luncheon Session

Chairman: Rev. Vincent Breen, Superintendent of Schools, Roman Catholic Diocese of Brooklyn; Chairman, Committee of Non-Public School Officials

Greetings:

Dr. Robert J. Kibbee, Chancellor, The City University of New York
Dr. Harold M. Proshansky, President, The Graduate School and University Center, The City University of New York
Dr. Joel Segall, President, Baruch College

Speaker: The Honorable Gordon Ambach, Commissioner of Education, The State of New York

1:00 - 1:30 p.m. Afternoon Plenary Session

The Expanding Role of the School

Speaker: The Honorable Stephen R. Aiello, President, New York City Board of Education

1:30 - 3:00 p.m. Afternoon Workshops

Session C: The School as the Local HEW?
Health services.
Social services.
Recreational activities.
Continuing education.

Chairman: Mr. Ralph Brande, Superintendent, Community School District 22, Brooklyn, New York

Session D: Education and Survival
The information/technology explosion.
The energy crisis.
The population explosion.
Pollution and the environment.

Chairman: Mr. James Mahoney, Roman Catholic Archdiocese of New York

3:00 - 3:30 p.m. Concluding Session

Dr. Seymour P. Lachman

3:30 - 4:30 p.m. Reception for Dr. Frank J. Macchiarola, Chancellor, New York City Public Schools

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